

## CLAIMS

What is claimed is:

1. A stackable, vertical axis windmill comprised of a frame structure and a rotor assembly.
2. The stackable, vertical axis windmill as described in claim 1 wherein
  - a. the frame structure is comprised of a plurality of solid frames, a plurality of open frames, a plurality of frame support cables, a plurality of outside support cables;
  - b. the rotor assembly is comprised of a plurality of horizontal rotor assembly supports, a rotor axis, rotor panel assembly supports, a bottom flange assembly, a flex coupling assembly, a top flange assembly, and a plurality of rotor support cables.
3. The stackable, vertical axis windmill as described in claim 2 wherein
  - a. the rotor assembly is comprised of two or more rotors panel assemblies;

- b. the rotors panel assemblies are comprised of a rotor panel, a trailing edge, a leading edge, and a windfoil;
  - c. the trailing edge, the leading edge, and the windfoil are elongated structures affixed to the rotor panel parallel with the rotor axis.
- 4. The stackable, vertical axis windmill as described in claim 3 wherein
  - a. the wind foil is an elongated triangular structure running along the edge of the trailing edge parallel to the rotor axis;
  - b. the leading edge is affixed to the rotor panel on the opposite side of the rotor panel from the wind foil;
  - c. the leading edge is a thin rectangular sheet of material connected to the trailing edge and oriented such that an angle of less than 60 degrees is formed between the small rectangular sheet and the rotor;
  - d. the trailing edge is a thin rectangular sheet of material with essentially the same dimensions as the leading edge;
  - e. the trailing edge is connected to the rotor panel and is oriented such that an angle of approximately 45 degrees is formed between the trailing edge and the rotor panel;

- f. the top frame flange assembly is comprised of a top flange plate that is attached via a plurality of bolts to a top flange bearing;
- g. the bottom frame flange assembly is comprised of a bottom flange plate, a split plate, and a bottom flange bearing.